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yet identified. By this time my buggy was loaded, and, though I by no means considered the log exhausted, I marked the locality, in my mind, and wended my way home, more than ever impressed with a sense of the little I know and how much there is to learn, even from a log. Here were fifteen species obtained with no great effort in a very short time. Two are also tropical, perhaps more. But one lesson is that nothing, however common, should be neglected. I omit *musci*—several species.

SKETCH OF CURTIS.

BY WM. R. DUDLEY, CORNELL UNIVERSITY.

It is certainly an interesting and important fact in the history of Crytogrammic Botany in America that its two most eminent followers, both northern men by birth, should have been called by their professional duties, as clergymen, to the great state of North Carolina, early in their careers. This state is probably unsurpassed in America in the variety of its plant forms. Its position is central, and the variation of soil and climate remarkable. From the broad, low savannahs to the subalpine summits of "The Black Dome," "The Roan," "The Grandfather," and their richly-forested slopes and valleys, would indeed have been the chosen field for this pioneer work, if choice, instead of accident, had guided these men there. The work of Schweinitz, from 1812 to 1818, and Curtis, from 1830 to 1867—the date of the publication, by the latter, of the CATALOGUE OF THE INDIGENOUS AND NATURALIZED PLANTS OF NORTH CAROLINA,—resulted in the careful determination, preservation and cataloguing of nearly 2,400 species of fungi alone. Indeed, it is estimated that nearly two thirds of these were new to science. It must be remembered that this was mainly accomplished during the first great period of our national existence, viz.: before the civil war, when the science of botany did not receive much general encouragement from the public or from the schools or colleges, especially in the South. This happy outcome of circumstances, as well as his high regard for the distinguished attainments of Rev. Dr. Curtis, evidently led Dr. Gray, in Silliman's *Journal*, in 1868, to urge "our American Mycologist" to prepare a MANUAL OF THE FUNGI OF THE U. S., saying that, from its central position, North Carolina must contain nearly all the species of fungi of the Atlantic States, and unless he did write such a work, a vast amount of valuable knowledge of the forms of this group would be lost to the world, eventually. Unfortunately, such a work was never written. Had it been, what an impulse would have been given to the study of fungi! However, it is clear that a great work in this field was done by the men of the past generation, and the material used by them is still available in herbariums, where it can be consulted by their successors. But there has been danger that the history of the labors of these indefatigable explorers and writers, among whom we reckon Dr. Curtis as

one of the most distinguished, would never be written. Happily, Dr. Thos. F. Wood, of Wilmington, N. C., an old friend of Dr. Curtis, has recently published, in the "JOURNAL OF THE ELISHA MITCHELL SCIENTIFIC SOCIETY," for the year 1884-1885, pp. 9-31, "A SKETCH OF THE BOTANICAL WORK OF THE REV. MOSES ASHLEY CURTIS, D. D.," which gives an admirable account of his career. Nearly all the facts of personal history in this brief account are drawn from the article of Dr. Woods', and the writer here begs leave to express his thanks to that gentleman for permission to use these facts and for other information kindly furnished. He has also had recourse to the brief account in Silliman's *Journal*, Vol. 105, p. 391 (1873).

Moses Ashley Curtis was born May 11th, 1808, in Stockbridge, Mass. His father was Rev. Jared Curtis, of that place, and his mother a daughter of Gen. Moses Ashley. He graduated at Williams College, in the class of 1827, when only nineteen, and three years later went to Wilmington, N. C., as tutor in the family of Gov. Dudley. It is quite evident that he had acquired a strong taste for out-door life and for botanizing, during his youth, among the Berkshire hills, for at once he eagerly began the study of plants about Wilmington, not only determining the species, but observing the habits of the peculiar plants of the region. Dr. Wood presents a charming picture of the young tutor at this period, as follows: "Especially on Saturdays, he made excursions among the sand-hills and savannahs near Wilmington. At that time, Wilmington was a village of about 4,000 inhabitants, and the field for botanizing existed where now are busy streets. Close up to the village reached the pine forests, abounding with a flora rich and novel to the enthusiastic young botanist, while the savannahs, with their strange and interesting *Sarracenia*, *Pyxidanthera* and *Droseras*, and the thousands of gaudy heads of *Liatris* and the brilliant yellows of *Coreopsis* and *Solidago* charmed the eye and filled his portfolio. * * * He found absorbing pleasure in the quiet of the fields and forests; and no doubt he looked forward to the holiday with eager expectation, that he might exchange the constrained duties of the school room for the freedom of the woods and for pleasant intercourse with the old and new floral friends he was to meet. * * He was habitually accurate in his studies, and the results were early relied upon by his correspondents. Coming into a new field of botanical study, it was quite natural that he should have directed his attention to the habits of the very local *Dionæa muscipula*. Saturday after Saturday, he would visit the savannahs, and, lying at length upon the ground, would watch its peculiarities."

The result of this loving study was the completion, in 1833, and the publication, in 1834, in the BOSTON JOURNAL OF NATURAL HISTORY, Vol. I, of his first contribution to science, an "ENUMERATION OF PLANTS GROWING SPONTANEOUSLY AROUND WILMINGTON, N. C." Remarks were added on new or obscure species. His account of *Dionæa* was extended, and his observations and conclusions so accurate and carefully expressed that, at present, there is little in his account that, living,

he would wish to recall. He corrected several errors then prevailing in regard to it, and confirmed the opinion of Ellis that it consumed the insects captured. In the meantime, returning to Boston, he studied for the ministry, took orders in the Protestant Episcopal church, at Richmond, Va., in 1835, and with his wife went to Lincolnton, in Western North Carolina, to enter upon mission work in the upper and mountain districts. Here he remained some years, and while faithfully ministering to those in need in the lonely forests or valleys of that region, his journeys never failed to bring to him new plant-forms, or old and long-lost ones as he retraced, at times, the track of the elder Michaux among the higher mountain-valleys and peaks.

He became thoroughly familiar with this delightful forest region, and furnished Dr. Gray, on the occasion of his first visit to it, in 1841, with "a complete itimerarium."

The active intellectual cast of the man is shown in his reaching out into new fields, early in his botanical career; for he soon began to accumulate facts on the great and profound questions of geographical distribution of plants, and to interest himself in the lower cryptogams.

His professional work called him to Raleigh, to Washington, Beaufort Co., to Hillsborough, to Society Hill, S. C.,—where he remained nine years; back again to Hillsborough, N. C., in 1856, where he remained till his death, April 10th, 1872.

Schweinitz' death occurred in 1834, or the year Dr. Curtis published his "PLANTS ABOUT WILMINGTON." Unquestionably the great *resume* of the former's work in fungi, his "SYNOPSIS FUNGORUM" (1831), had early attracted the attention of the young clergyman, whose heart had become fixed on botany as an avocation, but, apparently, it was not until ten years after Schweinitz' death that he began seriously to take up the lines laid down by his predecessor. In 1846, he opened correspondence with Mr. Ravenel, of South Carolina, in 1848, with Rev. M. J. Berkeley, of England, and, during the latter year, he published his first "CONTRIBUTION TO THE MYCOLOGY OF NORTH AMERICA," in the *American Journal of Science*, Vol. 56, p. 349 (1848). He says at this time that, since the death of the late Mr. Lea, of Ohio, "I do not know of any American botanist who is giving this obscure but interesting order any special attention except H. W. Ravenel, Esq., of South Carolina, and myself." To Dr. Curtis, therefore, all American collections of Fungi made after this date were referred, as a rule. Many of the species described by him were, however, referred to his lifelong friend, Dr. Berkeley, for final judgment, and appeared under the joint authorship of "Berk. & Curtis." This work he pursued unremittingly, often at the expense of his health, which was never very robust. After a time, he overcame, through the persuasion of Mr. Berkeley, his prejudice against fungi as food, and during the latter part of his life ascertained by personal testing that 111 species of the fleshy fungi of North Carolina (indicated in his catalogue by italics) were eatable, estimating at least forty or fifty of the eatable species to occur in the mountain regions, but still uncollected by him.

Some of the Phænogamia bore his name as author, while it is estimated that 500 new species of fungi were described either by himself or by "Berk. & Curtis." His account of the "WOODY PLANTS" of his state is full of useful information, and he was ever on the alert to give useful information and to do good to the people of his state; not that he might get a reputation, but simply for their sakes.

The portrait accompanying the sketch above referred to, from the plate in possession of Dr. T. F. Wood, shows a full face of character and refinement. Activity of intellect, keen, intense nervous force, and uncompromising honesty are everywhere expressed in it.

We append a list of his papers on mycology, printed in Silliman's *Journal* and the Philadelphia Academy of Sciences. The Bibliography of a few other papers will be given in the next JOURNAL:

1. CONTRIBUTIONS TO THE MYCOLOGY OF NORTH AMERICA. (M. A. Curtis.) Amer. Jour. of Sci., Vol. 56, p. 349 (also note on p. 444), 1848. It contains thirty species in all orders, ten of them new to science, the others not before reported in America. From N. C., S. C. and R. I. (Olney collector of the latter).
2. CONTRIBUTIONS TO THE MYCOLOGY, etc. (Berkeley & Curtis.) Amer. Jour. of Sci., Vol. 58, p. 401, 1849. It contains thirty species of *Agaracini*,—three new species (Berk. & Curt.) From Nor. Car., So. Car. and R. I.
3. CONTRIBUTIONS TO THE MYCOLOGY, etc. (B. & C.) Amer. Jour. of Sci., Vol. 59, p. 171, 1849. It contains forty species of *Agaracini* and *Polyporei*,—eleven of them new (B. & C.); two of them new (Berk.); chiefly from North Carolina.
4. CONTRIBUTIONS TO THE MYCOLOGY, etc. (B. & C.) Amer. Jour. of Sci., Vol. 60, p. 185, 1850. It contains thirty species of Basidiomycetes,—ten of them new (B. & C.), from North Carolina and South Carolina.
5. "DESCRIPTIONS OF NEW SPECIES OF FUNGI, coll. by U. S. Exploring Ex., under Ch. Wilkes, U. S. N." (B. & C.) Amer. Jour. of Sci., Vol. 61, p. 95, 1851. It contains eight new species of Basidiomycetes and one new *Hypoxylon*, all from Sandwich and Feegee Islands and from New Zealand.
6. "EXOTIC FUNGI FROM THE SCHWEINITZ HERB." (principally from Surinam, Dr. Hering, of Phila., Coll.; a few are from Ohio). (Berkeley & Curtis.) Journal of Phila. Acad. of Sciences (new series), Vol. II, pp. 277-294, Pl. 25, with small figures of fifteen new species, 1850-1854. In this list occur descriptions of about thirty new species (B. & C.); also about the same number of *Schweinitzian* MS. species are here published.
7. "A COMMENTARY ON THE 'SYNOPSIS FUNGORUM' IN AMERICA BOREALI MEDIA DECENTIUM, BY L. D. DE SCHWEINITZ, 1831." (Berkeley & Curtis.) Journal of Phila. Acad. of Sciences (new series), Vol. III, pp. 205-224, 1855-1858. In writing this, the authors say: "A

fourth of the material has gone under review. We have had access to the numerous authentic specimens in the herbarium of Sir Wm. Hooker," and "Prof. Torrey has kindly presented us the collection given him by Schweinitz." The authors separate and describe two species as new; and a few new species are published from Schweinitz' MS. descriptions. All commented on are before No. 728 of the *Synopsis Fungorum*, etc., that is, up to and including *Thelephora*.

NEW LITERATURE.

BY W. A. KELLERMAN.

"FUNGI WHICH CAUSE DECAY IN TIMBER." By P. H. Dudley. Journal of the New York Microscopical Society, February, 1886.

The fungus, *Lentinus lepideus*, Fr., was found to be very destructive to railway sleepers, bridge timbers and planks made of yellow, or Georgia pine (*Pinus palustris*, Mill.). Its whitish, delicate mycelium secretes fluids possessing acid re-actions, readily softens the thin-walled tracheides, causing their decomposition. "Decomposition of the wood, the so-called 'Dry-rot,'—which, contrary to the general opinion, never takes place in the absence of moisture—as rapidly ensues as the development of the mycelium (which secretes enough moisture for its own nourishment), unless the moisture be dried by external agencies. In railway sleepers, as soon as the thin-walled tracheides are softened by the action of the fungus, larvæ, from one-sixteenth to one-eighth of an inch long, perforate and consume them, leaving the thick-walled, harder cells in the condition of a series of shells, rendering the sleeper useless in less time than would the action of the fungus alone."

"THE MYCOLOGIC FLORA OF THE MIAMI VALLEY." By A. P. Morgan. Polyporei concluded. The Journal of the Cincinnati Society of Natural History, Vol. IX, No. 1. April, 1886, pp. 1-8.

The following are described: *Trametes*, with six species; *Dædalea*, with four species; *Favolus*, with one species; *Merulius*, with six species; *Porothelium*, with one species; and *Solenia*, with two species.

"CHAMPIGNOUS PARASITES DES PHANEROGAMES EXOTIQUES," par M. N. Patouillard. Revue Mycologique, 1er Avril, 1886.

"FUNGI GALLICI EXSICCATI," Centurie, XXXVIIe. C. Roumeguere. 1. c.

"SUR QUELQUES DÉFORMATIONS DES PHANEROGAMES CAUSÉES PAR LES CHAMPIGNOUS PARASITES; par M. E. Rostrup. 1. c.

"BOMMERELLA, NOUVEAU GENRE DE PYRENOAMYCETES." El. Marchel. 1. c.

Bommerella, nov. gen. (*Etym.* a dom. E. Bommer peritissima mycologa Bruxellensi). Fungus conidiophorus *Oosporam* exhibens. Perithecia superficialia, sparsa, ostiolata, contextu, parenchymato fuligineo, seltis vestita. Asci octospori, pedicellati, aparaphysati. Sporæ eximie triangulares, depressæ.